

Work Order ID 71466

Monday, July 04, 2011 1:31:46 PM



Page 1

Item ID: D3391-023

Revision ID:

Item Name: Mid Tube Assembly

Start Date: 7/5/2011 Start Qty: 1.00

Required Date: 7/19/2011 Req'd Qty: 1.00

Reference:

Approvals:

Process Plan: MEDate: 7/07/04

Tooling:

Date:

Setup Start



Stop



QC: _____

Date: _____

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr	Revision Nbr
D3391	Rev H

100

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

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W/O:		WORK ORDER CHANGES					
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Item ID: D3391-023

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Approval\$:

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Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

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11-Open .375" holes to .438" ***do not open fwd saddle holes***

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allignment, open up previously transfer drilled pilot holes in D3391-023-021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drilol remaining 6 wearpte holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- counterbore two aft wearplate holes in D3391-021 as per dwg

18- Open 12 wearplate holes in D3391-021 to 0.297" dia.

19-Deburr and blow out all chips from inside tube

11/09/20

11-9-24

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Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110



QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

①

B 11-10-29

120



Chemical Conversion Coat per QSI005 4.1

0.00

HandFinish

Memo

0.00

Hand Finishing

①

SAD 11-10-25

130



QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

11-10-25

Dart Aerospace Ltd

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

140

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

0.00

Skidtubes

Memo

0.00

1-Open float bag holes as per dwg
2-C'sink float bag holes as per dwg
3- Prepare tube for welding
4-Bond web in place as per Dwg D3391 & QSI 015.
Adhere for 12 hours)
A/R Sikaflex exp: 12-4-5
batch#: M118393

11-10-25

150



QC5- Inspect part completeness to step on W/O

0.00

QC

0.00

Quality Control

1 0 8/11/10/24

160



Skidtubes

0.00

Skidtubes

0.00

Skidtubes

1-Weld crossbolt spacer as per dwg D3391 & QSI 004
2-grind weld flush

A/R M118736

1 0 8/11/10/24

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170



QC10- Inspect visual per QSI004- ground welds

0.00

Sun Jul 01/27

QC

Quality Control

180



QC5- Inspect part completeness to step on W/O

0.00

Sun Jul 01/27

QC

Quality Control

185



Pressure Wash per QSI005 4.3

0.00

1X4M1111/27

HandFinish

Hand Finishing

Memo

0.00

AND REALODINE AS PER PAR09-043

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W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



Powdercoat

Powder Coating

W117745

Memo

9:10 0.00
320 0F
9:40

IX 8 M 11/10/31

200



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

IX 8 M 11/10/31

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



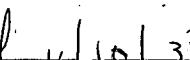
Skidtubes

Skidtubes

0.00

1

6



Skidtubes

Memo

0.00

1- insert D3391-021 into D3391-23

2- insert T-pins into first and third fwd saddle holes

3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364

4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos

5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415

6- deburr, re-alodine and blow out chips

7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

220



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Dart Aerospace Ltd

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230



HandFinishing

0.00

/ d M u 1 . 0 1 3 1 :

HandFinish

Memo

0.00

Hand Finishing

Install Inserts as per Dwg

240



QC5- Inspect part completeness to step on W/O

0.00

/ 11 11 01 03

QC

Memo

0.00

Quality Control

250

Identify as per dwg & Stock Location: W16

0.00

0412-742-043 / B75563

/ d M u 1 . 0 1 3 1

Packaging

Memo

0.00

Packaging

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

MF
11-10 - 01

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W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

Monday, July 04, 2011 1:31:44 PM

Page 1

Work Order ID: 71466



Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 7/5/2011

Required Date: 7/19/2011

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP A 05.10.20 New Issue KJ/EC
IPP B 06.02.10 ECN773 dwg rev.D EC
IPP C 07.03.20 rev F dwg EC
IPP D 07.03.28 re-format EC
IPP E 07.10.31 ecn 1053P EC
IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
Rev:J add in seq 140 expire date & sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100 		Manufactured	No			100	Each	79.0000	1	1		1	3/11/09/20

Skidtube Extrusion

Location	Loc Qty	Loc Code
HALL	79	
37065	4	
50251	75	

D3391-021 	Fwd Tube Assembly	Manufactured	No			100	Each	0.0000	1	1		B71455 (x1) M 11/01/11
D3389-1 	Web	Manufactured	No			140	Each	1.0000	1	1		

Location	Loc Qty	Loc Code
LG	1	
71333	1	

22165

① DD 11-10-25

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Picklist Print

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Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 7/5/2011

Required Date: 7/19/2011

Start Qty: 1.00

Required Qty: 1.00

D3681-1



Manufactured No

160

Each

9.0000

5

5

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

LG

9

68958

2

69893

7

D3591-1



Manufactured No

210

Each

27.0000

2

2

Bushing

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST068

27

57350

2

66147

25

ALS4-1032-130



Purchased No

230

Each

1,002.000

20

20

Insert

ALS-4-1032-130



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
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ST281

8

117331

8

ST282

994

117717

994

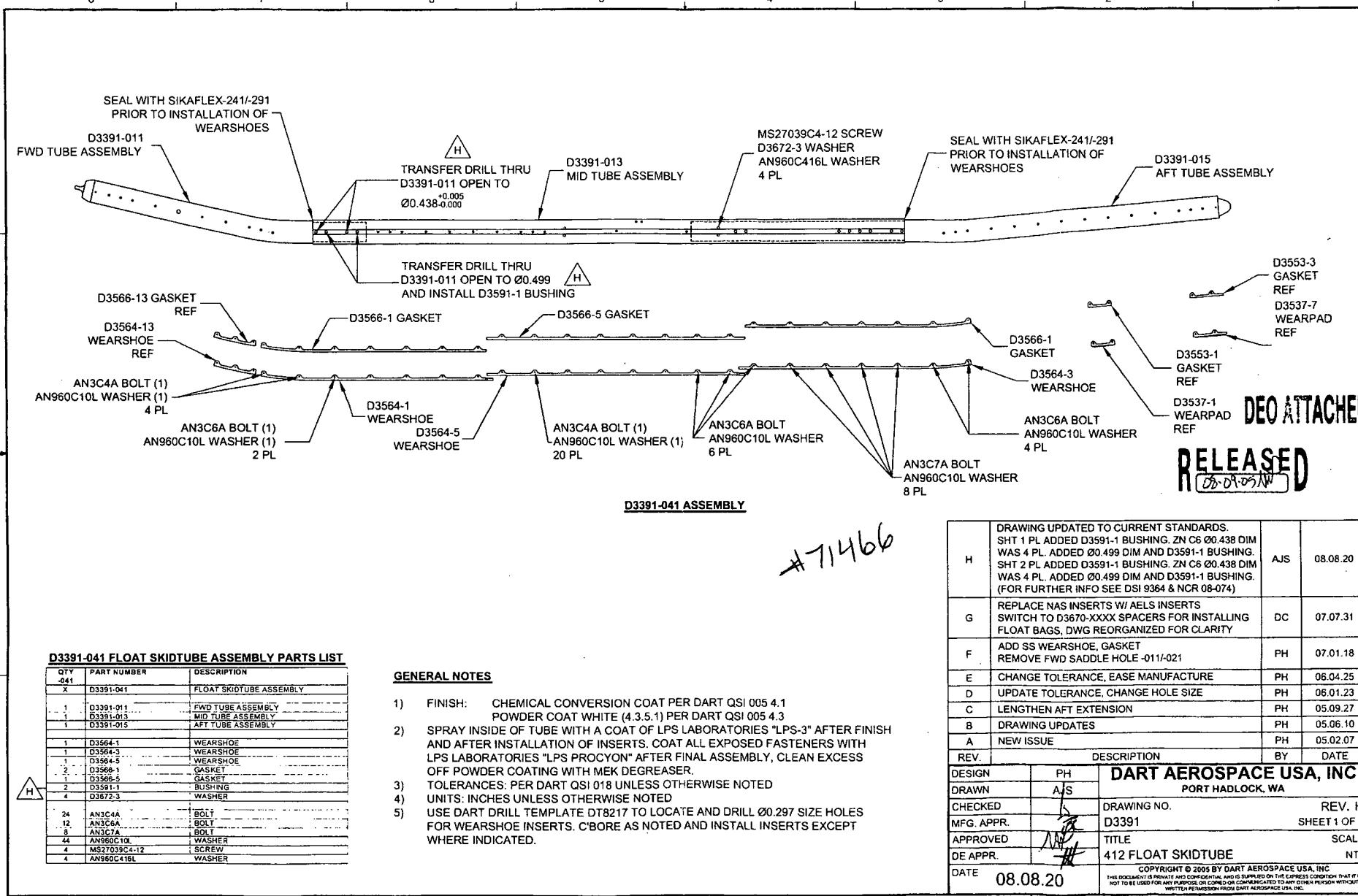
Dart Aerospace Ltd

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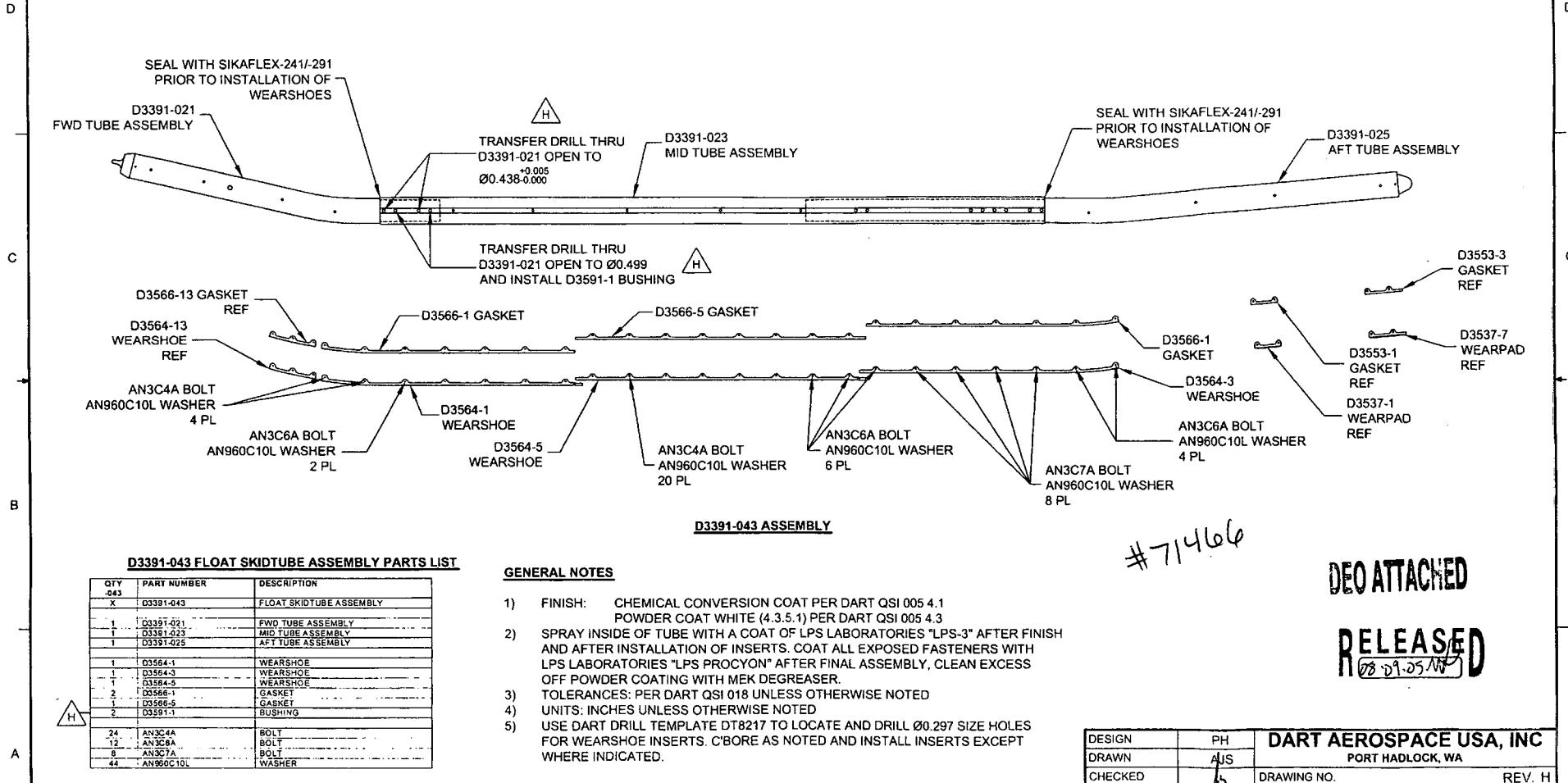
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8 7 6 5 4 3 2 1



DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE USA, INC. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	

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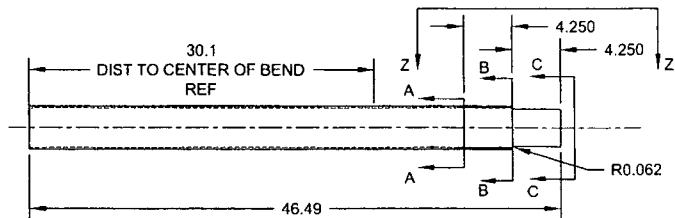
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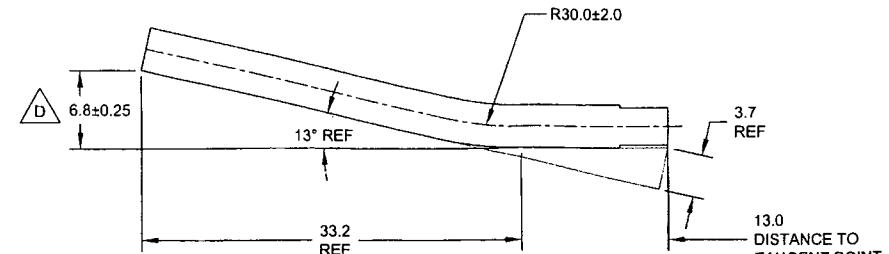
NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

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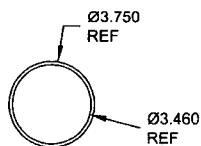


D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)

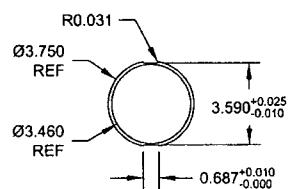


D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)

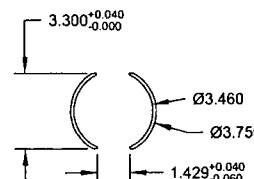
#71466



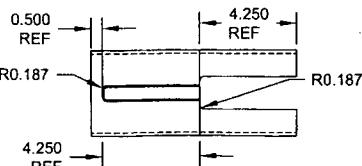
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

DESIGN	PH	DART AEROSPACE USA, INC
DRAWN	AUS	PORT HADLOCK, WA
CHECKED	JK	DRAWING NO. REV. H
MFG. APPR.	6	D3391 SHEET 3 OF 8
APPROVED	JK	TITLE
DE APPR.	JK	SCALE
DATE	08.08.20	412 FLOAT SKIDTUBE NTS

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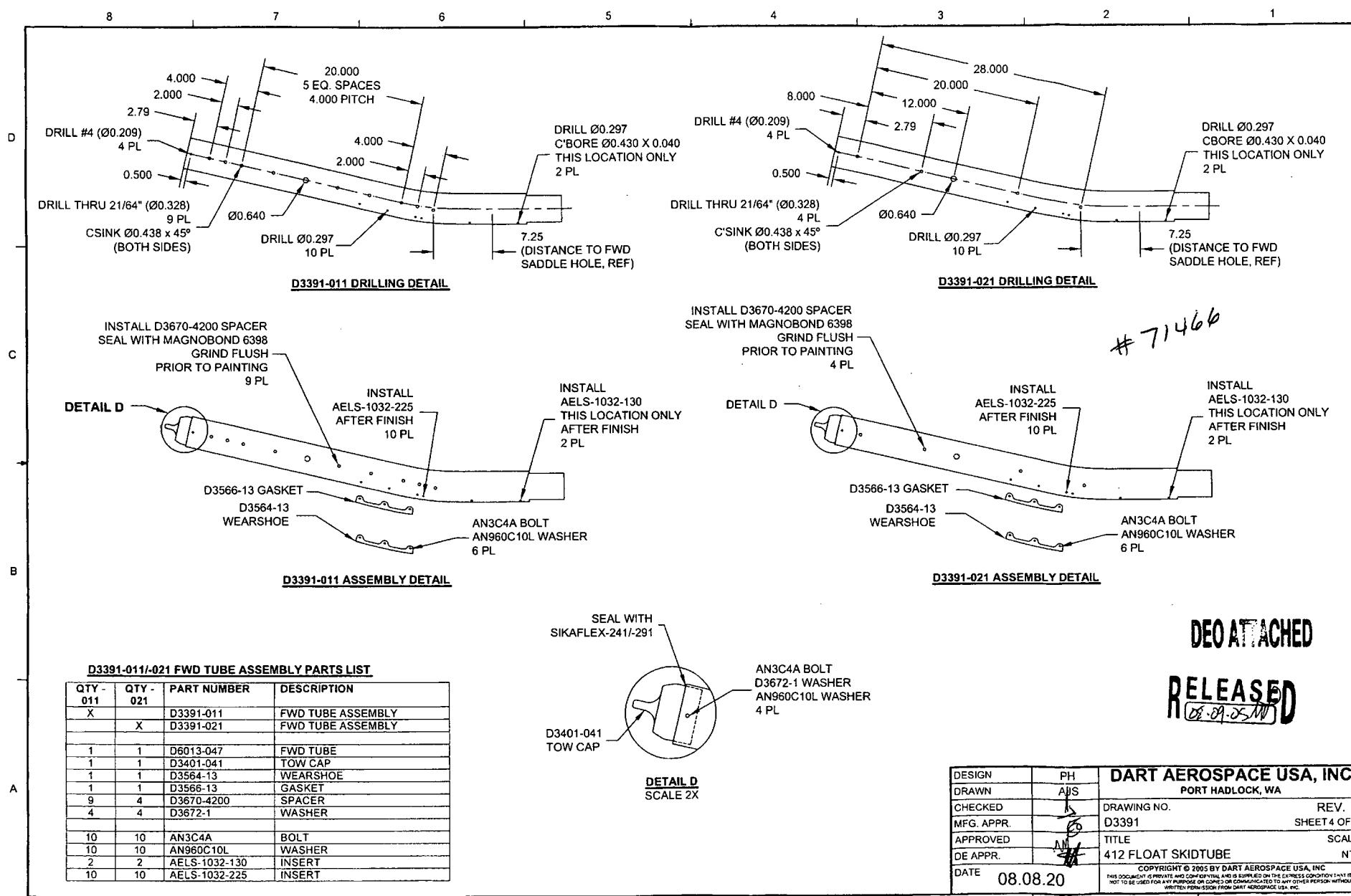
Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



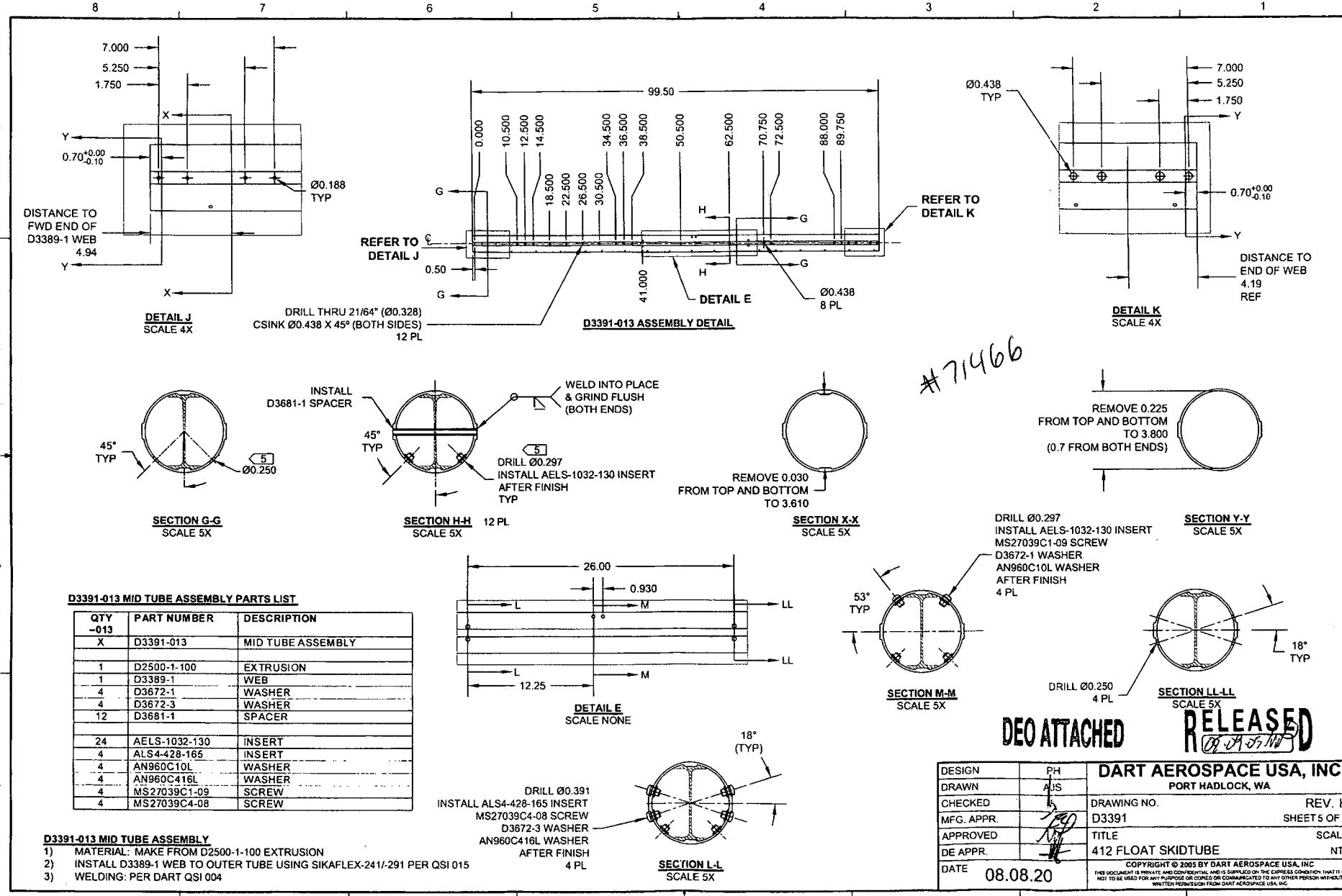
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DEO ATTACHED

RELEASED
09-03-2014

PL SCALE 5X
HE D RELEASED 09-05-04
DART AEROSPACE USA, INC

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AIS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.	<i>100</i>	D3391	Sheets 5 of 8
APPROVED	<i>MM</i>	TITLE	SCALE
DE APPR.	<i>MM</i>	412 FLOAT SKIDTUBE	NTS
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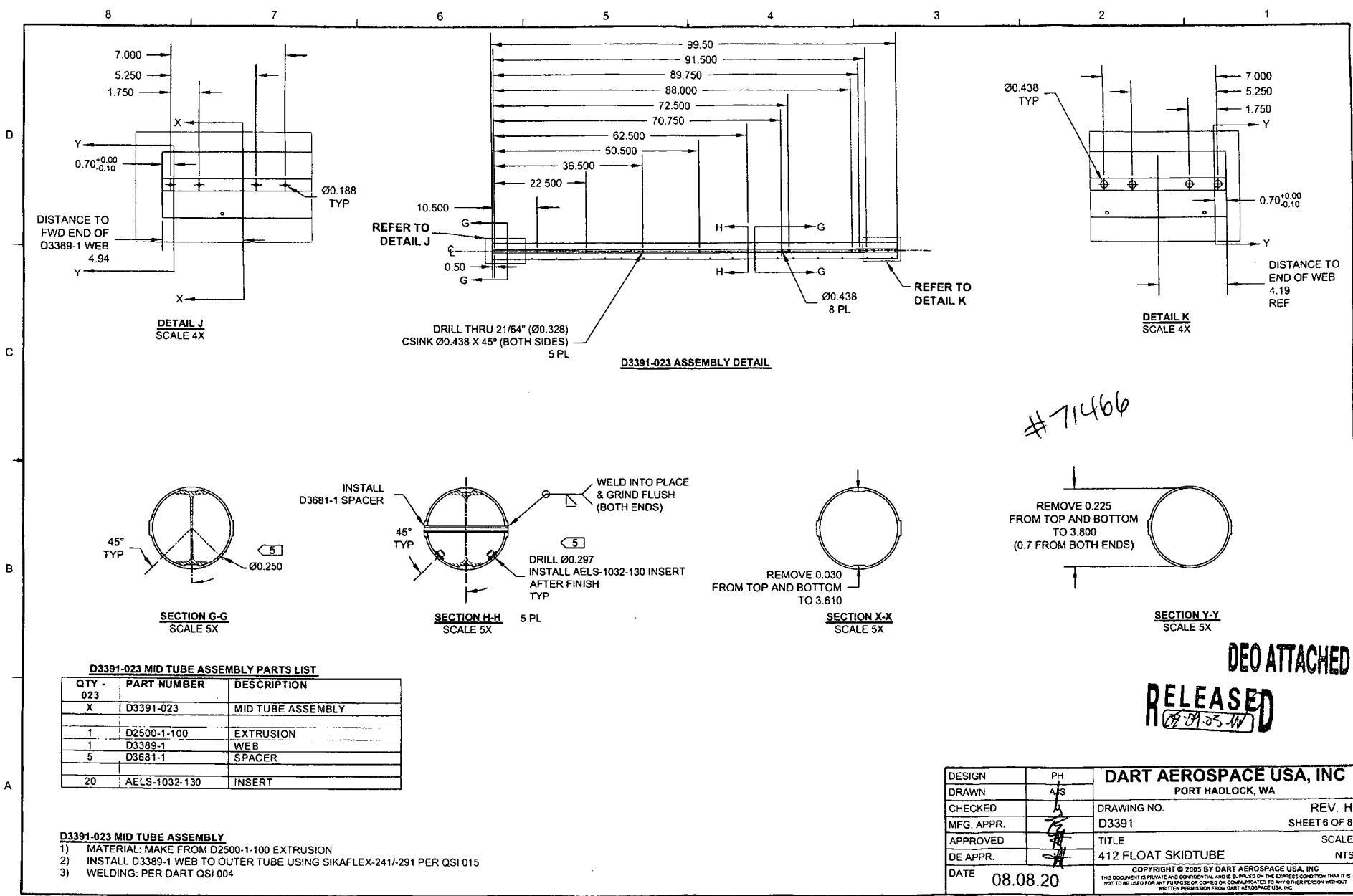
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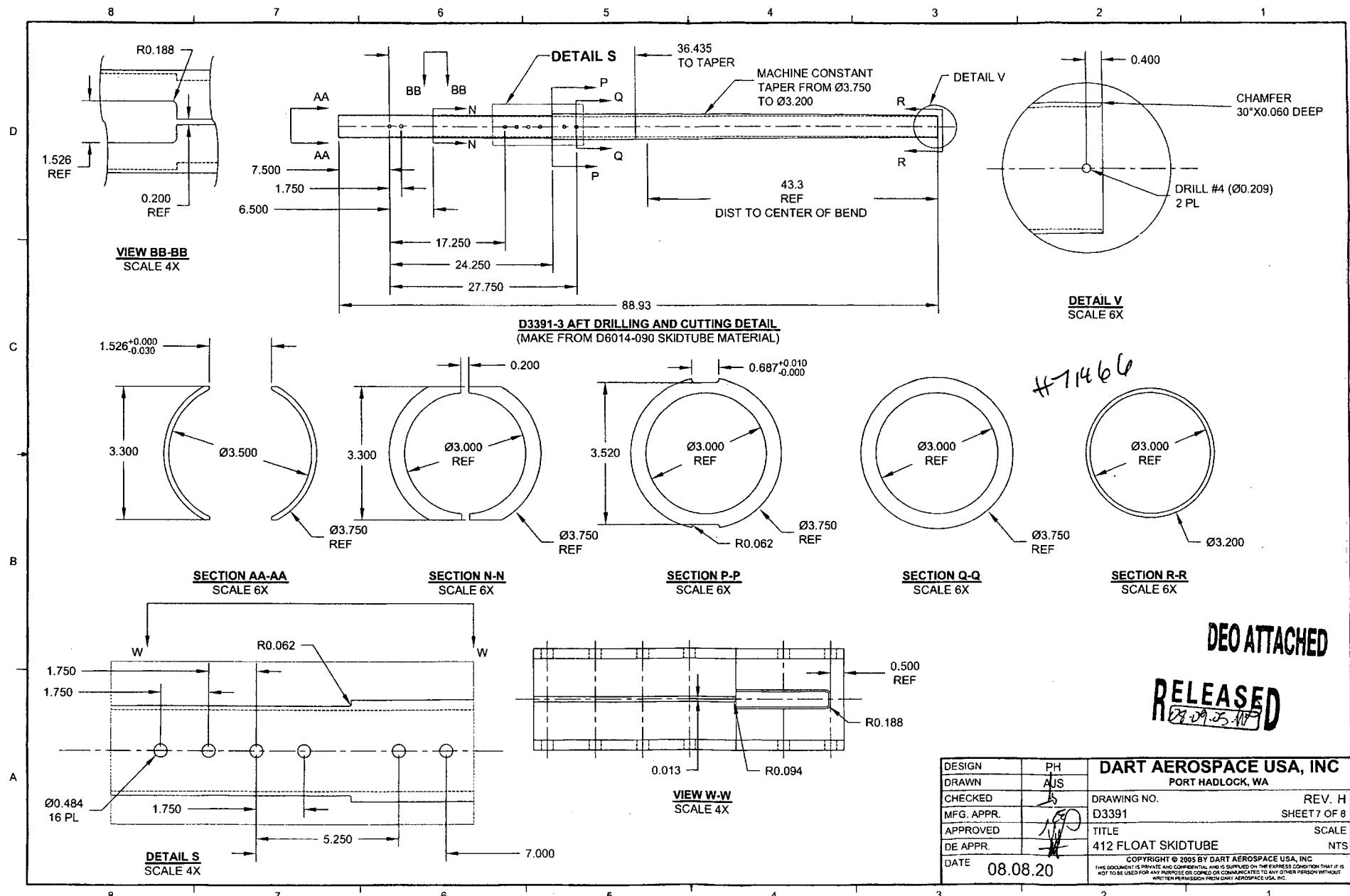
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28-09-05 100

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DRAWN	AJS	PORT HADLOCK, WA	
CHECKED	<i>LS</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>LS</i>	D3391	SHEET 7 OF 8
APPROVED	<i>LS</i>	TITLE	SCALE
DE APPR.	<i>LS</i>	412 FLOAT SKIDTUBE	NTS
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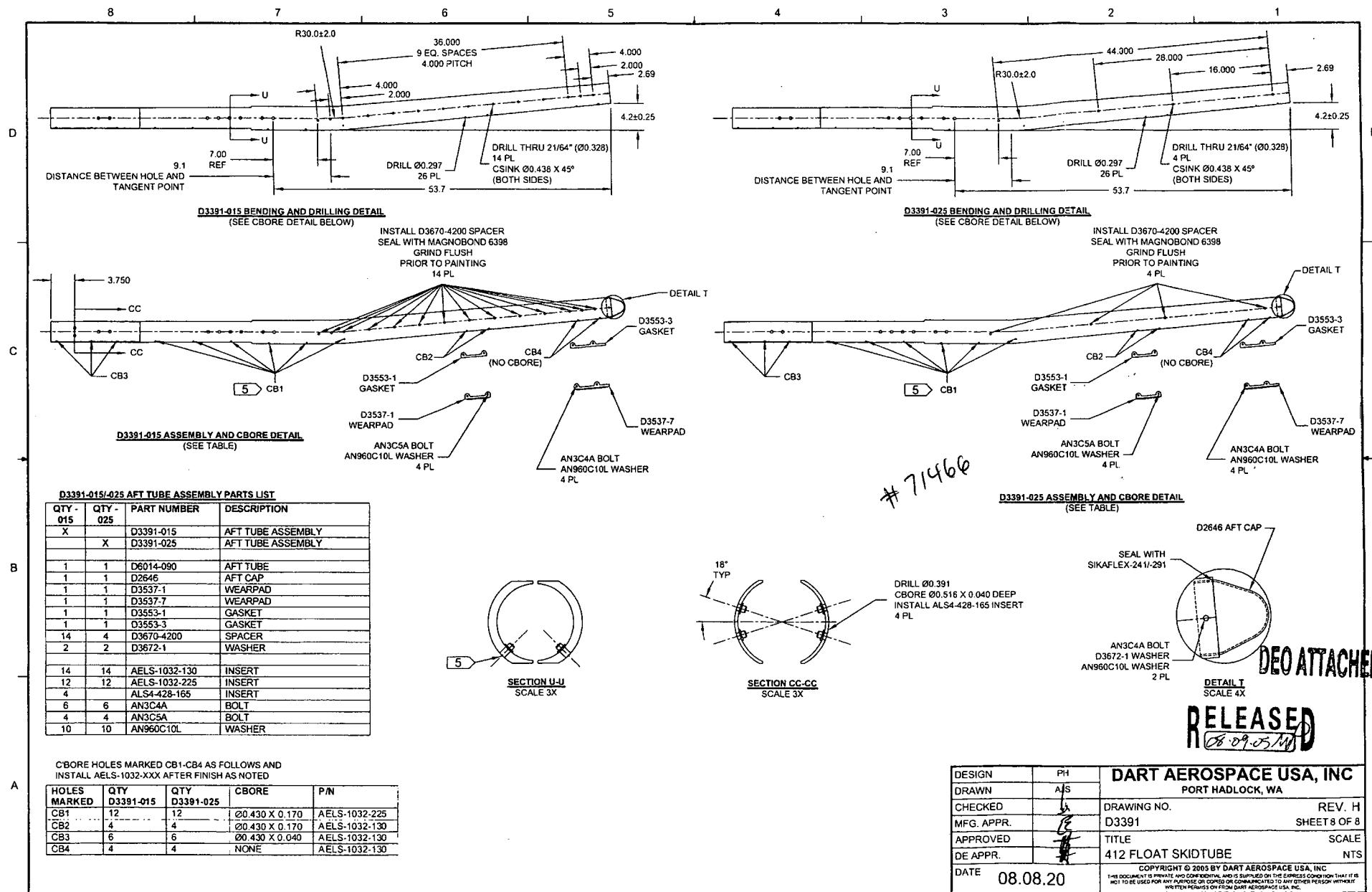
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08-09-05 M

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08-09-05 TWD

ART AEROSPACE USA, INC
PORT HADLOCK, WA

WING NO. REV. H
91 SHEET 8 OF 8
5 SCALE

FLOAT SKIDTUBE NTS
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Digitized by srujanika@gmail.com

— — —

11. *What is the name of the person who is the subject of the photograph?*

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>JP</i>	CHECKED <i>J</i>	MFG. APPR. <i>AA</i>	APPROVED <i>MP</i>	DE APPR. <i>HP</i>		
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30	DATE 09/09/30	DATE 09/09/30	

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.~~ COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
2010-02-02

MP

#71466

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NOTE: Date & initial all entries

Mike Petsche

From: Linda Lacelle <llacelle@dartaero.com>
Sent: Thursday, October 27, 2011 5:06 PM
To: 'Mike Petsche'; dshepherd@dartaero.com
Subject: FW: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

fyi

From: Shirley Hay [mailto:SHay@darths.com]
Sent: October-27-11 3:55 PM
To: Linda Lacelle; Nancy MacLeod; sbedford@dartaero.com; mfauteux@dartaero.com; 'Brigitte Golden'; rmolnar@dartaero.com
Cc: Linda Pilon; Carole O'Rourke; Carrie Pearson
Subject: RE: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

Hello

Please send out the old configuration

Regards
Shirley Hay

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, October 26, 2011 3:34 PM
To: Nancy MacLeod; sbedford@dartaero.com; mfauteux@dartaero.com; 'Brigitte Golden'; rmolnar@dartaero.com
Cc: Linda Pilon; Shirley Hay; Carole O'Rourke; Carrie Pearson
Subject: RE: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

There has been a recent engineering change on the float skids, and the earliest we can ship these would be the week Nov. 7th, or we ship the current CHG number with the old configuartion of wearplates...please let mw know how you would like to proceed.

Linda

From: Nancy MacLeod [mailto:NMacLeod@darths.com]
Sent: October-20-11 1:56 PM
To: 'sbedford@dartaero.com'; 'llacelle@dartaero.com'; 'mfauteux@dartaero.com'; Brigitte Golden; rmolnar@dartaero.com
Cc: Linda Pilon; Shirley Hay; Carole O'Rourke; Carrie Pearson
Subject: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

Please see the attached PO for Bristow US LLC.

If you require any further information, please let me know. Thank you,

NO. 264

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 73035
Part number: 3391-023
Description: MIG Tube
Welding Process: Tig[] Mig[]
Base materiel: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier Barclay Elliott Date of Test Coupon 11-08-31
Welder Barclay Elliott Date of Test Coupon 11-08-31

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Dart Aerospace Ltd

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